



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

AUG 16 2005

DOT-E 14171
(SECOND REVISION)

EXPIRATION DATE: July 31, 2007

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: National Aeronautics and Space Administration
(NASA)
Houston, Texas

(See Appendix A to this document for a list of additional grantees)

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of Nitrogen, compressed in non-DOT specification fully wrapped carbon fiber reinforced aluminum lined cylinders that are an integral part of a pressure system of a tile repair tool and Shuttle Tile Repair material, classified as a corrosive. The tool is used in the NASA Shuttle Tile Repair Cure In Place Ablator Applicator (CIPAA) Project. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.

b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

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4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.301a(a)(1) and 175.3 in that a non-DOT specification cylinder is not authorized, § 173.154 in that the 66 pound weight restriction is exceeded, and § 173.301(f) in that the cylinder is not equipped with a pressure relief device.
5. BASIS: This exemption is based on the application of NASA dated June 9, 2005 submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Nitrogen, compressed	2.2	UN1066	N/A
Corrosive liquid, N.O.S. (Gamma-Aminopropyltriethoxysilane)	8	UN1760	II

7. SAFETY CONTROL MEASURES:

a. PACKAGING -

(1) Packaging prescribed for nitrogen is a non-DOT specification fully wrapped carbon fiber reinforced aluminum lined cylinders manufactured and marked by Carleton Technologies, Incorporated in accordance with DOT-E 11194, except that the cylinder is not equipped with a pressure relief device. The maximum service pressure of the cylinders is 4,500 psig. The cylinders are an integral part of a pressure system of a tile repair tool used in the NASA Shuttle Tile Repair Cure In Place Ablator Applicator (CIPAA) Project. Each CIPAA tool pressure system consists of two manifolded cylinders as shown on drawings on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA).

(2) Packaging prescribed for the class 8 material is a metal receptacle as described in the June 8 application and on file with OHMEA.

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b. TESTING -

(1) The pressure system of the CIPAA tool must be tested to the NASA CIPAA Structural Verification Plan - JSC 49915 prior to first shipment.

(2) Each composite cylinder must be retested in accordance with the requirements of DOT-E 11194.

c. OPERATIONAL CONTROLS -

(1) The pressurized system must be shipped installed in the CIPAA tool in accordance with the shipping containment plan described by NASA's Johnson Space Center CIPAA Tool Project.

(2) Each CIPAA tool must be shipped in strong outside packagings in accordance with § 173.301(a)(9).

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

c. The pressurized system is only authorized for 10 years from the date of manufacture, termination of the Shuttle Program, whichever occurs first.

d. The pressurized system must be used exclusively in the CIPAA tool for the Space Shuttle Program.

e. The CIPAA shipping container must be marked "DOT-E 14171" on two opposite sides in letters at least 2 inches in height on a contrasting background.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, cargo aircraft only, and passenger-carrying aircraft.

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10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each aircraft or motor vehicle used to transport packages covered by this exemption. The shipper must furnish a copy of this exemption to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this exemption must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

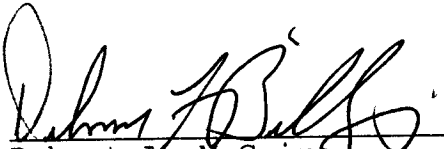
Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this exemption are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials

incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this exemption must notify the Associate Administrator for Hazardous Materials Safety -- OHMEA, in writing, of any incident involving a package, shipment or operation conducted under terms of this exemption.

Issued in Washington, D.C.

for 
Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

AUG 16 2005

DATE

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

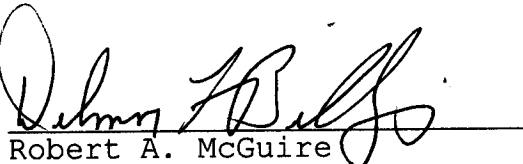
Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: AM

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The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Application Date	Issue Date	Expiration Date
Lockheed Martin Littleton, CO	June 8, 2005	Jun 16, 2005	Sept. 30, 2005
United Space Alliance Kennedy Space Center, FL	June 8, 2005	Jun 16, 2005	Sept. 30, 2005



for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety